

US EPA ARCHIVE DOCUMENT

The background features a grid of orange and yellow circles of varying sizes, with thin white lines crisscrossing over them. A large, semi-transparent orange circle is positioned in the upper left quadrant, with several thin white lines radiating from its center towards the right side of the slide.

INNOVATION

Energy & Materials Tracking

Terri Goldberg, NEWMOA

Energy, Materials, & Cost Tracking: Workshop Outline

- Background
- Environmental Management Accounting
- Overview of EMFACT Project – Q & A
- Demonstration of PROJECT
- Next Steps & Discussion

Your Experience

- What's Your Experience?
- Do Companies/Firms Do a Good Job of Tracking Energy & Materials Flows & Associated Costs?
- If So, Under What Circumstances?
- If Not, Why Not?

Background

- Evaluating Financial Costs & Benefits of P2
- Identifying Hidden Costs & Benefits
- Evolved into Environmental Management Accounting
- Critical Role of Materials & Energy Tracking
- Linking Improved Environmental Protection & EMFACT – Understanding Full Costs

Environmental Management Accounting (EMA)

EMA can be defined as the identification, collection, estimation, analysis, internal reporting, & use of materials & energy flow information, environmental cost information, & other cost information for both conventional & environmental decision-making within an organization

EMA Key Points

- Focuses on costs internal to the company; EMA does not include external costs to individuals, society, or the environment
- Places emphasis on accounting for environmental costs
- Encompasses environmental and other cost information, & information on physical flows & fates of materials & energy
- Can be used for most types of management activity or decision-making within an organization, but is particularly useful for proactive environmental management

Incorporates & integrates two of the three building blocks of sustainable development - environment & economics

Benefits of EMA

Examples of the Benefits of EMA –

- Pollution Prevention
- Design for Environment
- Environmental Life Cycle Assessment/Costing/Design
- Environmental Supply Chain Management
- Environmentally Preferable Purchasing
- Extended Producer/Product Responsibility
- Environmental Management Systems
- Environmental Performance Evaluation & Benchmarking
- Environmental Performance Reporting

EMA is not merely one environmental management tool among many - rather, EMA is a broad set of principles & approaches that provides the materials/energy flow & cost data critical to the success of many other environmental management activities

Importance of EMA

Range of decisions affected by environmental costs is generally on the rise; EMA is becoming increasingly important not only for environmental management decisions, but for routine management activities, such as:

- Product & process design
- Cost control & allocation
- Capital budgeting
- Purchasing
- Supply chain management
- Product pricing
- Performance evaluation

Benefits of EMA to Firms

Potential Benefits of EMA to Industry—

- More accurately track & manage the use & flows of energy & materials, including pollution/waste volumes, types, & fate
- More accurately identify, estimate, allocate, & manage/reduce costs, particularly environmental types of costs
- More accurate & comprehensive information to support the establishment of & participation in voluntary programs to improve environmental performance
- More accurate & comprehensive information for the measurement & reporting of environmental performance, thus improving company image with stakeholders, such as customers, local communities, employees, government, & finance providers
- Other Benefits???

EMARIC

EMARIC's mission is to promote the integration of environmental cost information & materials & energy flow information into routine management decision-making of private & public sector organizations, as a support for improved environmental performance

Focus on Information Sharing Online

Some Available Tools

- P2 Finance Software – needs upgrade
- E2 Finance Software – needs upgrade
- Proprietary Software Tools
- EPA's Project Software

- Others???

More EMA Information

For more EMA information visit:

www.emawebsite.org/about_ema.htm

www.newmoa.org/prevention/topichub/

Key Barriers to EMA

With all of the Benefits Outlined Above--

- Why Don't More Firms to EMA?
- What Are the Barriers to EMA?

BRAINSTORM IDEAS

EMFACT Project

- Successful P2 is based on an entity's ability to understand & improve its choice & use of materials & the associated financial impacts
- EMFACT project builds upon the current scientific & engineering applications of EMA as a critical aspect of sustainable production & P2
- NEWMOA, MA OTA, EPA Collaboration

EMFACT Project

No readily available & accessible, user friendly, comprehensive, low cost tool available in the US to support EMA implementation

EPA Support – Collaborative Science & Technology Network for Sustainability

Goals:

- **increase the implementation of P2 options by improving the ability of private sector entities to quantify & evaluate materials & energy uses & flows in their operations & to more effectively evaluate the cost & other impacts of making product & operational changes to improve their sustainable production**
- **enable public & private sector environmental assistance providers & others to more effectively help their clients evaluate materials & energy use & associated waste & losses & the potential savings from P2 investments to address those releases to the environment**
- **help companies & government agencies quantify the pollution reductions & associated costs saving from investments in implementing P2 & E2**

Audience for EMFACT Tool

- Federal, State, & Local Government Environmental Assistance Providers
- Private Sector Assistance Providers
- MEPs & Business Assistance Providers
- Companies Running Greening the Supply Chain Initiatives
- Performance Track & Other Environmental Leaders

EMFACT Tool

- Upgrade P2 & E2 Finance
- Apply Ease-of-Use of EPA's Project Tool

OTHER IDEAS??

SUGGESTIONS?

EMFACT Project Workplan

- **Research & ID Existing Tools**
- **Seeking Advise & Assistance**
- **Develop Advisory Group**
- **Procure Contractor Support for Developing Tool**
- **Pilot & Test tool**
- **Widespread Dissemination & Training**
- **Evaluation**

Next Steps for the Project

- Seeking Participants in Advisory Group
- Seeking Ideas for Existing Tools to Examine
- Questions????
- Comments????

Rest of Workshop

- Demonstration of EPA's Project
- Further Discussion

Further Information

- Terri Goldberg, NEWMOA,
Tgoldberg@newmoa.org;
(617) 367-8558 x302
- Rick Reibstein, MA OTA
Rick.Reibstein@state.ma.us;
(617) 626-1062